

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested in view of the discussion presented herein.

1. **Rejection of Claims under 35 U.S.C. 112, First Paragraph.**

The Examiner rejected Claims 1, 6, 8, 10, 17, 22, 25 and 27 under 35 U.S.C. § 112, first paragraph, for the stated reason that the specification did not meet the written description requirement with regard to the phrase "without requiring formation of artificial tips".

In response, the Applicant has deleted that language from the subject claims. Such amend with made for the purpose of advancing prosecution, and should not be construed as an acquiesce by the Applicant to the grounds for rejection.

In view of the above, the rejection is moot and should be withdrawn.

2. **Patentability of Claims.**

Notwithstanding the deleted language from the claims and the arguments made by the Applicant in the prior response where the deleted language was introduced, Claims 1, 6, 8, 10, 17, 22, 25 and 27, as well as the claims that depend therefrom, are nevertheless patentable over the prior art cited by the Examiner.

Referring to the prior art approaches, the Applicant states in the background section of the Specification at page 3, lines 8-10: "This technique, however, requires difficult and expensive tips to be formed and does not combine well with the silicon integrated circuit technology." Those skilled in the art will readily understand that this means that the embodiments of the present recited in the Applicant's claims do not require difficult and expensive tips to be formed, and that indeed, this is one of the motivations for the present invention.

Furthermore, FIGS. 1 and 2 clearly show that the Applicant's invention does not use, and therefore does not require such artificial emitter tips. Those skilled in the art will readily understand this indeed to be the case from viewing the drawings and reading the specification.

Note also that the specification teaches that the electron emitting layer is formed with asperities that promote field emission. While it has been known for many years that it is possible form an oxidized polysilicon layer with asperities that promote field emission of electrons, the inventor is ***the first to recognize that such asperities can replace the artificially sharpened tips*** that are needed in the prior art (e.g., Shealy et al. - USP 5,949,182 cited by the Examiner - col. 2, line 2) to form a light emitting device with an oxidized polysilicon layer; and a GaInP layer over the oxidized polysilicon layer. Certainly, had it been recognized at that the time that such asperities can be used, the Shealy et al. invention of having artificially sharpened tips would not have been necessary.

In the present invention, the electron emitting layer is formed with asperities that promote field emission of electrons. In a particular embodiment, an oxidized polysilicon layer is formed with asperities that promote field emission of electrons. See, for example, Applicant's specification at page 5, lines 18-20 where it is taught:

“Furthermore, the oxidized polysilicon layer is preferably formed in a manner that promotes the formation of asperities on the surface of the polysilicon that promote field emission of electrons into the SiO₂ layer overlying the polysilicon layer.”

It should be apparent at this point that the language deleted from the claims - namely, the recitation “without requiring formation of artificial emitter tips” - describes a result which is only possible because the Applicant has discovered that asperities will promote field emission and can take the place of the artificial tips. Those skilled in the would, from the Applicant's teachings in the specification and drawings, readily understand that because the asperities are promoted and are present, there indeed would not be the requirement for artificially forming tips. For this reason, the Applicant respectfully traverses the rejection under 35 U.S.C. §112, first paragraph. However,

as indicated above, the Applicant has deleted the phrase in order to advance prosecution.

But, further to the above discussion, and of significance with regard to patentability, ***the Applicant herein is the first to recognize that the asperities can take the place of the artificially generated sharp tips of the prior art.*** This is a significant breakthrough, and the prior art teaches away from this as can be clearly seen from the teachings of Shealy et al. cited by the Examiner. Clearly, this discovery is non-obvious in view of the prior art cited by the Examiner.

Accordingly, the pending claims recite an invention for which there is no teaching in the prior art. Furthermore, the prior art does not suggest or provide motivation or incentive for the invention recited in the Applicant's claims. To the contrary, the prior art teaches away from the instant invention in that the prior art requires artificially generated sharp tips, which are absent in the Applicant's invention.

Therefore, the Applicant respectfully submits that each of the pending claims recited subject matter which is patentable over the prior art, and further requests allowance of the pending claims.

3. Amendments Made Without Prejudice or Estoppel.

Notwithstanding the amendments made and accompanying traversing remarks provided above, that Applicant has made these amendments in order expedite allowance of the currently pending subject matter. However, the Applicant does not acquiesce in the original ground for rejection with respect to the original form of these claims. These amendments have been made without any prejudice, waiver, or estoppel, and without forfeiture or dedication to the public, with respect to the original subject matter of the claims as originally filed or in their form immediately preceding these amendments. The Applicant reserves the right to pursue the original scope of these claims in the future, such as through continuation practice for example.

4. Conclusion.

Based on the foregoing, the Applicant respectfully requests that the various

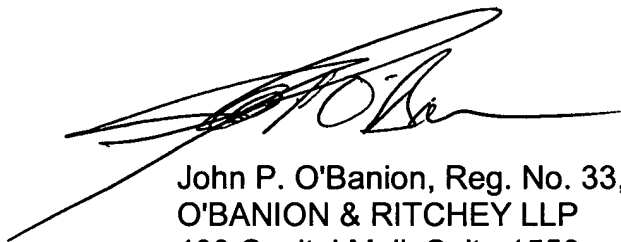
Appl. No.: 10/033,715
Amdt. Dated: 09/26/2005
Off. Act. Dated: 03/25/2005

grounds for rejection in the Office Action be reconsidered and withdrawn with respect to the presently amended form of the claims, and that a Notice of Allowance be issued for the present application to pass to issuance.

In the event any further matters remain at issue with respect to the present application, The Applicant respectfully requests that the Examiner please contact the undersigned below at the telephone number indicated in order to discuss such matter prior to the next action on the merits of this application.

Date: 9/26/05

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'J. P. O'Banion', with a long horizontal flourish extending to the right.

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CERTIFICATION UNDER 37 CFR 1.10

I hereby certify that the foregoing:

Amendment

is being deposited with the United States Postal Service on January 26, 2005 in
an envelope as "Express Mail Post Office to Addressee" Mailing Label Number
EV352299606US addressed to the: Commissioner for Patents, P.O. Box 1450,
Alexandria, VA 22313-1450.

JOHN P. O'BANION

(Type or print name of person mailing paper)



(Signature of person mailing paper)